REMARKS

The Examiner withdraws the earlier indication of allowable subject matter in claims 4-6, 11-13, 18-21, 29, 30, 33, and 34. For the following reasons, Applicants request reconsideration and allowance.

The Examiner notes several informalities in claims 1, 3, and 4 and makes a grammatical type suggestion which has been incorporated by amendment.

Claims 1-9, 10, 13, 23-28, and 34 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite. The claims have been amended to address the Examiner's editorial type concerns. Withdrawal of the rejection under 35 U.S.C. §112, second paragraph is respectfully requested.

Claims 1, 3, 7, 8, 10 and 32 stand rejected under 35 U.S.C. §103 as being unpatentable over WO 98/05140 to Osthoff in view of U.S. Patent 6,434,114 to Jain and further in view of U.S. Patent 6,640,325 to Fischer. This rejection is respectfully traversed.

Commonly-assigned Osthoff discloses sending a request ARQ for complete retransmission of a packet that has "too many uncorrectable errors" and error correction of data packets with a "manageable" amount of errors. In the latter case, the transmitter successively sends more parity bits when requested by the receiver. Each set of additional parity bits is based on the original parity bits but reordered differently for each additional parity request. The Examiner admits Osthoff lacks many features recited in the independent claims including: (1) no negative acknowledgement signal, (2) no detection of an absent data packet, and (3) no lost signal message. Osthoff lacks a fourth feature (4): "in response to the sending of the lost signal message, receiving from the transmitter a second different type of retransmission of the

information bits of the lost data packet" (quoted from claim 1). Osthoff does not retransmit information bits in response to a lost signal message.

Fischer discloses sending negative acknowledgements in packet communications. Fischer recognizes that "[t]here is a need for a packet error detection and recovery mechanism that operates at a lower layer in the network protocol stack that reduces the time required to recover from packets lost due to bit errors." Column 1, lines 58-61. Thus, Fischer does not distinguish between an erroneously-received packet and a packet that is not received. When a packet or frame is "lost" in Fischer, Fischer means that the packet or frame has been corrupted with unrecoverable errors. As a result, the receiving node 120:

> must drop the frame that has errors in it. The receiving node 120 has higher layers of a network protocol stack that must discover this missing frame and through higher-layer communication request a retransmission for the transmitting node 112.

Column 3, lines 33-37.

Jain discloses a system for enhancing an intelligent network service after a data flow has been established. The focus in Jain is not on distinguishing between lost data packets and erroneously-received data packets, but rather on how to "install the service specific features to the flow, i.e., after call set up." Column 3, lines 21-22. The Examiner focuses on the text in column 4, beginning at line 45, which explains that if a packet is lost at a terminating switch 25, a retransmission request is sent from a second intermediate switch 24. Like Fischer, Jain fails to distinguish between (1) detecting an error in an actually received data packet and sending a negative acknowledgement signal and (2) detecting the absence of a data packet and sending a lost signal. In Jain there are only lost packets. No distinction is made between a packet that is never received and a packet that is erroneously received.

Osthoff, Jain, and Fischer can not be properly combined. This rejection is a true mosaic type reconstruction of the independent claims that the Federal Circuit expressly forbids. *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999) ("[c]ombining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight.") With Osthoff lacking four claim features, the Examiner plucks individual features out of two different references to fill-in the missing blanks of Osthoff's teachings.

Both Jain and Fischer recognize only one kind of event: in Jain a lost packet and in Fischer an erroneous packet. In both Jain and Fischer, that single event triggers a single type of retransmission—a request for retransmission of the packet. There is no distinction between one type of retransmission versus another type of retransmission. In contrast, claim 1 describes that when an error is detected in a received packet, a negative acknowledgement is sent to the transmitter "to trigger a first type of retransmission of the parity bits to be used in a subsequent decoding operation at the receiver." On the other hand, when a data packet is detected as *absent (as opposed to simply having an error)*, a "lost" signal message is sent to the transmitter "rather than a negative acknowledgement signal, the lost signal message indicating that the data packet was detected as absent." The lost signal message is a different type of retransmission request that causes the transmitter to send "a second different of retransmission of the information bits of the data packet." In both Jain and Fischer, there is *only one* type of retransmission request signal and *only one* type of retransmission in response thereto.

That it might be feasible to replace certain parts of Osthoff or add to Osthoff using isolated features of Jain and Fischer is not the correct approach in a non-obviousness analysis. Instead, a proper motivation to combine requires an appreciation of the desirability of making the

combination. *Winner Int'l Royalty Corp. v. Wang*, 202 F.2d 1340, 1349 (Fed. Cir. 2000). That desirability cannot be gleaned only from applicant's own teachings.

Although the Examiner suggests that combining Fischer with Osthoff would "minimize the overhead cost of the network and time required to recover packet due to lost errors in [sic] reduced" and "can improve network performance," such highly generalized justifications are not an explicit motivation to combine different reference teachings. Of course, it is easy to look back with the road map of the pending claims and formulate these kinds of generalizations to support a hindsight reconstruction of a claim. But that approach is not permitted by the Federal Circuit. Moreover, the Examiner has not explained how Osthoff's overhead would be minimized by sending a negative acknowledgement signal. In at least one respect, adding a new signal to Osthoff and sending another type of signal *adds to Osthoff's overhead.* Nor has the Examiner demonstrated or explained how Osthoff's "network performance" would be improved by the proposed additional control signaling.

The Examiner further admits that both Osthoff and Fischer lack detecting an absence of a data packet and sending a lost packet message. The Examiner refers to Jain text at col. 4, lines 45-60. A review of that text reveals no motivation to combine with Osthoff and Fischer to include a lost signal. When the statement about "efficient retransmission" is read in context, it is clear that Jain is referring to a packet getting lost at an intermediate or end router. Rather than requesting retransmission from the packet source, Jain simply requests retransmission from the intermediate router which of course is more efficient. But that efficiency has nothing to do with the retransmission message being a "lost packet" signal. For Jain's purpose, that message could just as easily been called a "negative acknowledgement" signal—the same packet retransmission from the intermediate router would have occurred.

So both Fischer and Jain effectively *teach away* from the proposed combination with Osthoff in that they describe only one kind of packet detection and only one type of packet retransmission. In both Fischer and Jain, the same single kind of retransmission request is triggered when a packet is determined to be erroneous in Fischer or lost in Jain. So combining the three references would **not** result in treating an erroneously-received packet differently from a packet that is not received and is detected as lost—the same type of signal is sent. There is no teaching in either Fischer or Jain of doing different types of retransmission operations depending on what type of signal the transmitter receives from the receiver.

Combining Fischer and Jain is also improper because they are incompatible for combination. In Fischer, the receiver *must receive* a packet before it can determine the packet is erroneous, and therefore, before it can send out a request for retransmission. But Jain teaches just the opposite—*not receiving* a packet triggers a packet retransmission request signal.

The obviousness rejection based on the combination of Osthoff and Fischer and Jain should be withdrawn. The remaining rejections that rely on additional fourth and fifth references do not overcome the problems with the main rejection. The application is now in condition for allowance. An early notice to that effect is earnestly solicited.

Respectfully submitted,

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